TRENDS IN ALCOHOL USE AND HEALTH-RELATED HARMS IN NSW

Report of the Chief Health Officer 2016

NSW GOVERNMENT | Health

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FOREWORD

In Australia, most people drink alcohol for enjoyment on social occasions and for relaxation at levels that have a minimal effect on health. However, a proportion of people drink at levels harmful to their health. Excessive alcohol consumption is one of the main preventable public health problems in Australia.

The Report of the Chief Health Officer 2016 describes patterns of alcohol use and alcohol-related health impacts in NSW. It also provides information on available education, prevention, and intervention programs related to alcohol misuse. Information is provided on priority populations such as young people, Aboriginal people, people from socioeconomically disadvantaged areas, and people living in regional and remote areas.

I am pleased to see that young people are initiating drinking later and are drinking at less hazardous levels than previous years. It is also encouraging to see there are a decreasing number of adults drinking at levels that increase long-term risk of harm. However, improvements can still be made in reducing harmful drinking in men, young adults, Aboriginal people, and people living in regional and remote areas of NSW.

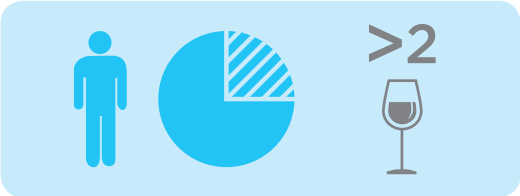
While this report focuses on trends in alcohol use and its corresponding health impacts, excessive alcohol consumption not only affects the drinker but can also contribute to relationship and family problems, public intoxication, and other criminal offenses. Alcohol use also increases the likelihood and extent of aggressive behaviour and reduces the cognitive and verbal capacity to resolve conflict. This combination of effects means that alcohol use can increase the likelihood of physical violence, including domestic violence. Improvements in all these areas may result from reductions in drinking levels.

This report offers the opportunity to reflect on alcohol use in NSW and the impact this has on individual health and the health system as a whole. With this in mind, the forthcoming *NSW Health Alcohol and Other Drug Strategic Plan 2016–2020* provides a strategic framework for programs and policies designed to encourage the safe consumption of alcohol, as well as supporting the major goals of keeping people healthy and supporting access to treatment services.

Dr Kerry Chant PSM

Chief Health Officer and Deputy Secretary,
Population and Public Health

EXECUTIVE SUMMARY

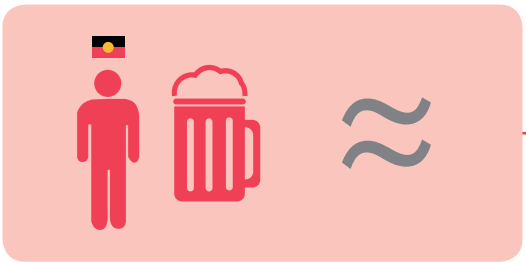


A **quarter** of all **adults** drink at levels that place their **long-term health at risk**. Although rates have **declined** over the last 10 years, the **overall impact** on health is still **high**.

Just **under one quarter** of all **adults** drank **more than 4 standard drinks** on a single occasion in the last **4 weeks**, which placed them at a **higher immediate risk** of harm.

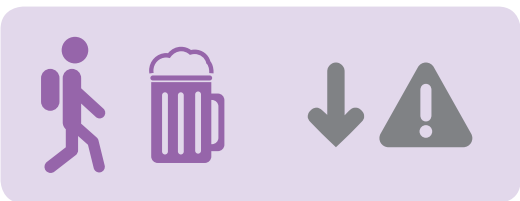
Harmful drinking is **highest** for people aged **16-24 years** and **lowest** for people over **65 years**.

People living in **regional** and **remote areas** are **more likely** to drink alcohol at **harmful levels**.



Aboriginal people are **equally** likely to **abstain** from drinking alcohol as **non-Aboriginal people**. However, among those **Aboriginal people** who do drink, a **higher proportion** drink at levels that place their **long-term health at risk**.

Adults across all **socioeconomic** groups are **equally** likely to drink at levels that place their **long-term health at risk**.



Young people are **initiating drinking later** and drinking at **less hazardous levels** than they used to.

Alcohol-attributable hospitalisations for **15–24 year olds** have **decreased** over the last 9 years.

INTRODUCTION

The Report of the Chief Health Officer series has been produced regularly since 1996 and is a flagship publication of the NSW Ministry of Health. Prior to 2012, the printed edition provided an overview of the health of the whole state population. From 2012 onwards, the printed edition changed, to provide an in-depth picture of the health of a particular sub-population or health issue. In 2016, this edition highlights alcohol use and alcohol-related harms in NSW.

Excessive alcohol consumption is the leading contributor to the burden of illness and deaths in Australia for people up to 44 years of age, and third overall behind tobacco and high body mass.[1] Economically, it has been estimated that the total societal cost of alcohol misuse in NSW is greater than $3.87 billion a year.[2] Excessive drinking has been associated with a range of short and long-term harms such as injury, liver disease, and mental health problems.[3–7] In addition, it is estimated that around 5% of all cancers diagnosed each year in Australia are attributable to long-term alcohol use, with even low levels of alcohol consumption associated with a greater chance of developing cancer.[8] There is some evidence to indicate that declines in alcohol use are not occurring at the same rate for all population groups.[2] It is estimated that the top 10% of the heaviest drinkers in Australia are responsible for over half (53.2%) of the total alcohol intake, with this group at the greatest risk of experiencing alcohol-related harms.[9]

The health impacts from alcohol vary for different age groups and include:

- Drinking during pregnancy can result in congenital abnormalities and disability.[3]
- Underage drinking can affect the normal development of the brain.[4–6,10]
- Young people, up to the age of 25, are at higher risk of alcohol-related harm, particularly due to a greater risk of accident and injury.[3,11–14]
- Heavy drinking can also adversely affect brain development in young people, which is not complete until around 25 years of age.[3–6]
- Older people can be more vulnerable to the effects of alcohol due to physiological changes associated with ageing, especially as a result of adverse interactions between certain types of medications with alcohol.[3,7,15–16]

The contribution of alcohol to overall energy intake is often overlooked. Four standard drinks of beer, consumed by a man with average energy intake, would account for about 15% of his overall energy intake.[17] In view of the increasing prevalence of overweight and obesity, limiting alcohol intake may be an important factor in maintaining healthy weight.

This report presents information on alcohol consumption and impacts from 4 perspectives: drinking frequency, harmful drinking, non-drinkers and health impacts.

LONG-TERM HEALTH EFFECTS OF ALCOHOL MISUSE

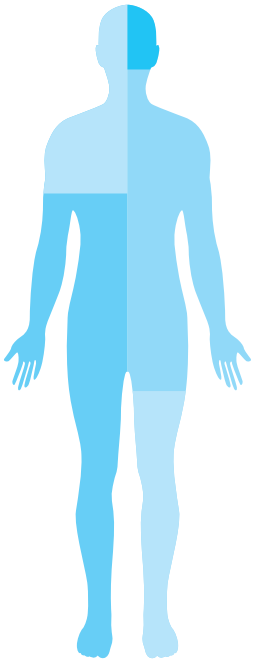
Mental health
- Dependence
- Depression
- Anxiety

Brain
- Cognitive impairment

Cardiovascular
- High blood pressure
- Arrhythmia
- Cardiomyopathy

Liver
- Cirrhosis
- Hepatitis

Cancer
- Mouth
- Throat
- Oesophagus
- Liver
- Colorectal
- Breast



Source: National Health and Medical Research Council. *Australian guidelines to reduce health risks from drinking alcohol.* Canberra: Commonwealth of Australia. 2009.[3]

IMPORTANT CAVEATS AND DATA LIMITATIONS

Data used in this report are from a variety of sources including surveys and administrative data collections. A description of each data source is available in the section Data Sources. All the surveys collected information by self-report. Self-reports of certain health indicators are known to have social desirability bias, that is, the tendency for people to present a favourable image of themselves.[18] This may lead to positive behaviours being overstated, with undesirable or negative behaviours being understated.

This report uses confidence intervals to describe the level of precision for each health measure, which can be interpreted as providing a 95% chance that the true rate of a particular health measure lies between the lower and upper confidence interval limits. Wider confidence intervals reflect less certainty in an estimate. For trend graphs, the confidence intervals are represented as shaded areas around each line. For single year comparisons between groups, the confidence intervals around the measure are represented by a line through the top of each bar.

This report contains comparisons based on remoteness categories. There are 5 remoteness categories: Major cities, inner regional, outer regional, remote, and very remote. In this report, the category “Outer Regional and Remote” includes the remoteness categories “Outer regional”, “Remote” and “Very Remote”.

DRINKING FREQUENCY

Daily drinking by adults has decreased in the last decade

About 1 in 13 (7.5%) adults drink alcohol every day

1 in 13 (7.5%)

Daily drinking has decreased from 1 in 10 adults (10.4%) in 2006 to 1 in 13 (7.5%) in 2015

2 in 5 (43.7%)

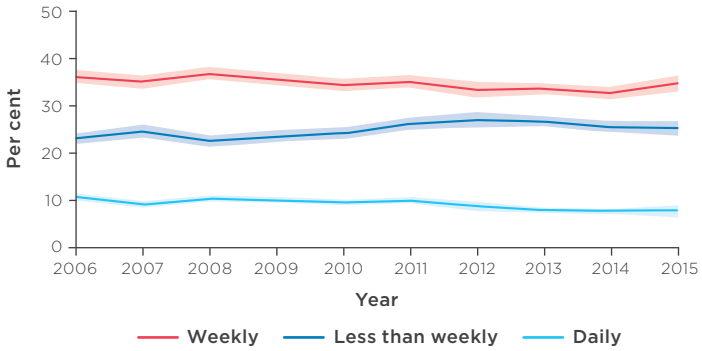
High school students who drank alcohol in the last 12 months dropped from 3 in 5 (63.5%) in 2005 to 2 in 5 (43.7%) in 2014

Daily drinking of alcohol by people aged 16 years and older was relatively stable between 2006 and 2011, at around 1 in 10. A small decrease in daily alcohol use occurred between 2011 (9.8%) and 2015 (7.5%).

About 1 in 7 people aged 65 years or over drank alcohol daily (14.8%). This was substantially higher than the youngest age groups (0.8% of people aged 16–24 years and 3.3% of people aged 25–44 years). Men were also more likely than women to drink alcohol every day.

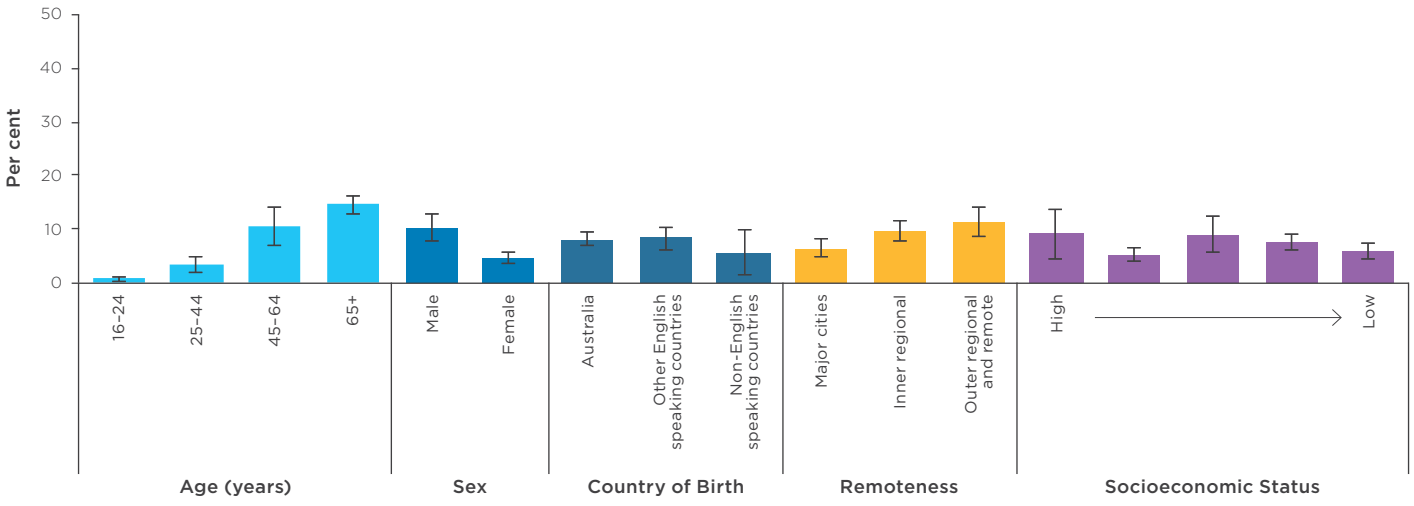
The current Australian guidelines recommend that, if people under 18 years of age drink at all, they should delay starting for as long as possible.[3] In 2014, about two-thirds of high school students (65.1%) reported ever having an alcoholic drink. The proportion of high school students who drank alcohol in the last 12 months decreased substantially between 2005 (63.5%) and 2014 (43.7%). While the proportion of young people drinking daily is low, about two-thirds of high school students reported that they have ever had an alcoholic drink.

Drinking frequency in adults, 16 years and over, NSW 2006–2015



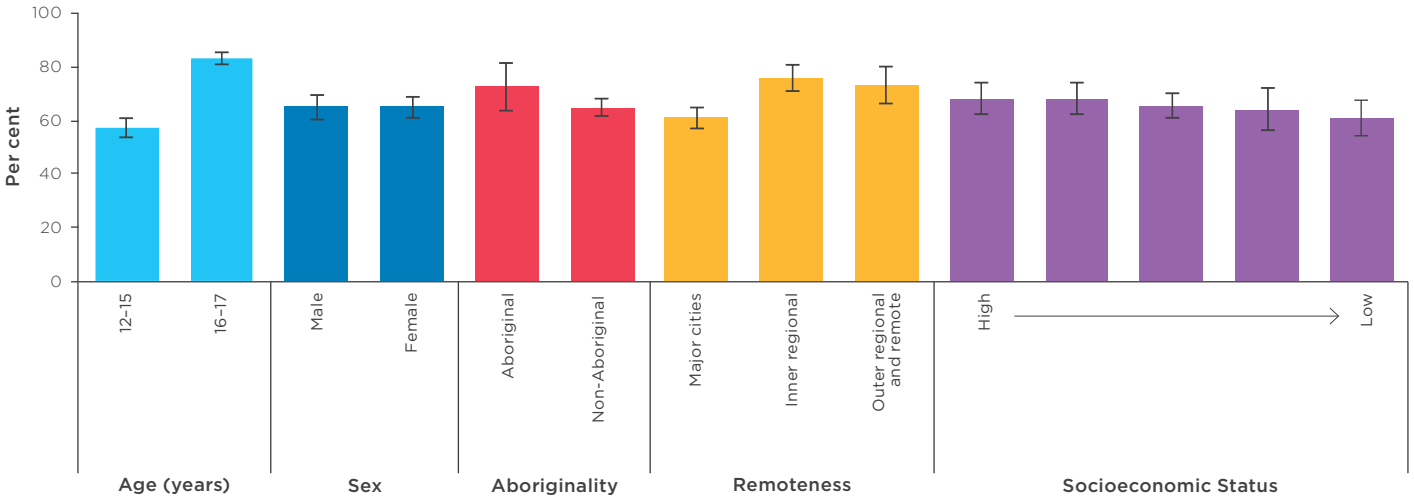
Source: NSW Population Health Survey

Daily drinking in adults, 16 years and over, NSW 2015



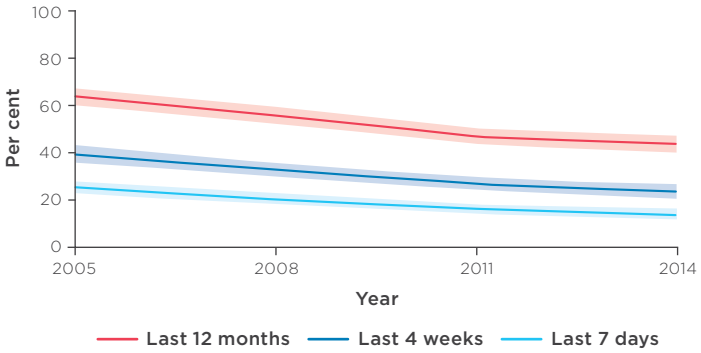
Source: NSW Population Health Survey

Ever had an alcoholic drink, students aged 12–17 years, NSW 2014



Source: NSW School Students Health Behaviours Survey

Most recent alcoholic drink, students aged 12–17 years, NSW 2005–2014



Source: NSW School Students Health Behaviours Survey

High school students aged 12–17 years who live in major cities were less likely to have been provided their last drink by a parent as students in the rest of NSW. There has been no change in the proportion of students aged 12–17 years reporting parents as the source of their last drink since 2005 (33.7% in 2014 versus 32.6% in 2005). About 3 in 5 high school students aged 12–17 years (61.3%) were supervised by an adult when they last drank alcohol.

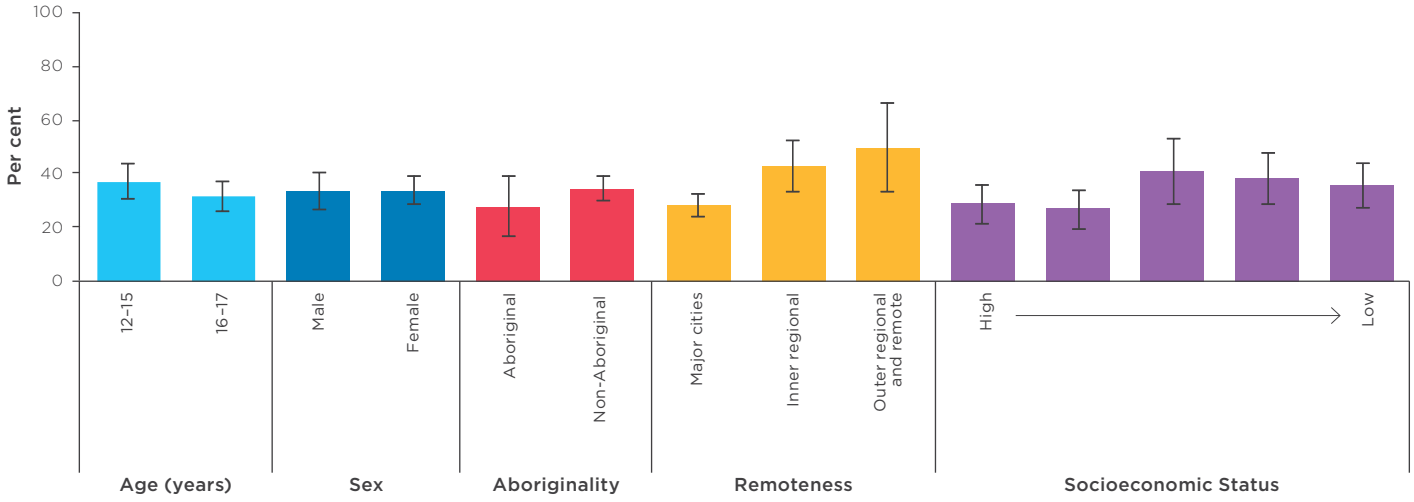
Children and young people under 18 years of age

The National Health and Medical Research Council (NHMRC) recommend that children and young people under 18 years of age should refrain from drinking alcohol.[3]

For those aged 15–17 years:

- the initiation of drinking should be delayed as long as possible
- if drinking does occur it should be at a low risk level and supervised by an adult

Parents as source of last alcoholic drink, students aged 12–17 years who drank in last 7 days, NSW 2014



Source: NSW School Students Health Behaviours Survey

HARMFUL DRINKING

About 1 in 4 adults drink at levels that place their long-term health at risk

5.5%

The proportion of adults drinking at levels that increase long-term risk of harm has decreased 5.5% between 2006 (31.4%) and 2015 (25.9%)

1/8 1/3

1 in 8 people aged 65 years or over drink at levels that increase their long-term risk of harm compared with more than 1 in 3 people aged 16–24 years

About 1 in 20 (5.7%) high school students who drank in the last year reported drinking 4 or more drinks in a day in the last week, compared with 1 in 10 (10.3%) in 2005

The *Australian guidelines to reduce health risks from drinking alcohol* are intended as an evidence base for policy development.[3] They also provide guidance for Australians when it comes to drinking alcohol.

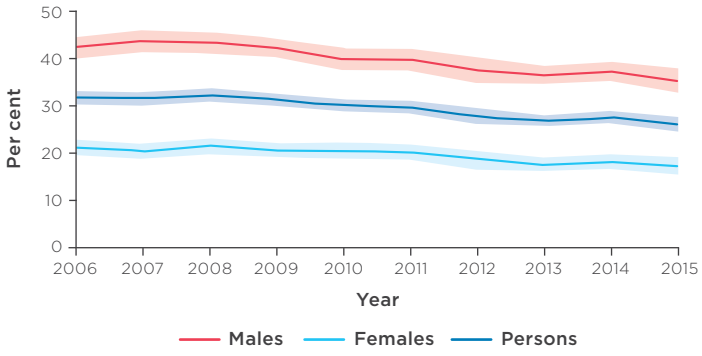
LONG-TERM RISK OF HARM

The proportion of people who reported drinking at levels that put them at long-term risk of harm fell from 31.4% to 25.9% between 2006 and 2015—a reduction of 5.5%. Those who were more likely to drink at levels that put them at long-term risk included:

- men
- Aboriginal people
- people born in Australia or other English speaking countries, and
- people living outside of major cities.

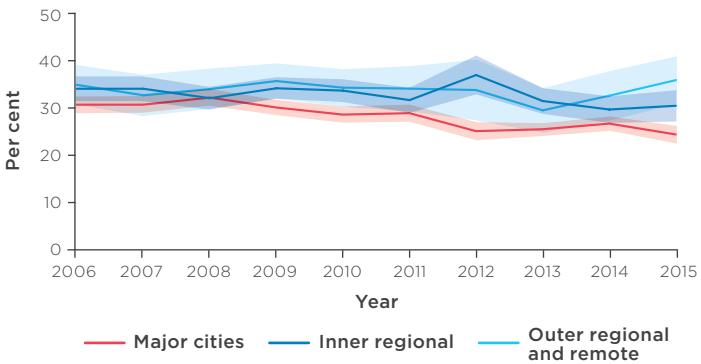
About 1 in 8 adults aged 65 years and over drank at levels that put them at long-term risk, compared with more than 1 in 3 people aged 16–24 years.

Adults drinking at levels that increase long-term risk of alcohol-related harm, 16 years and over, NSW 2006–2015



Source: NSW Population Health Survey
Note: Relates to more than 2 standard drinks on a usual day when alcohol is drunk.

Adults drinking at levels that increase long-term risk of alcohol-related harm by remoteness, 16 years and over, NSW 2006-2015



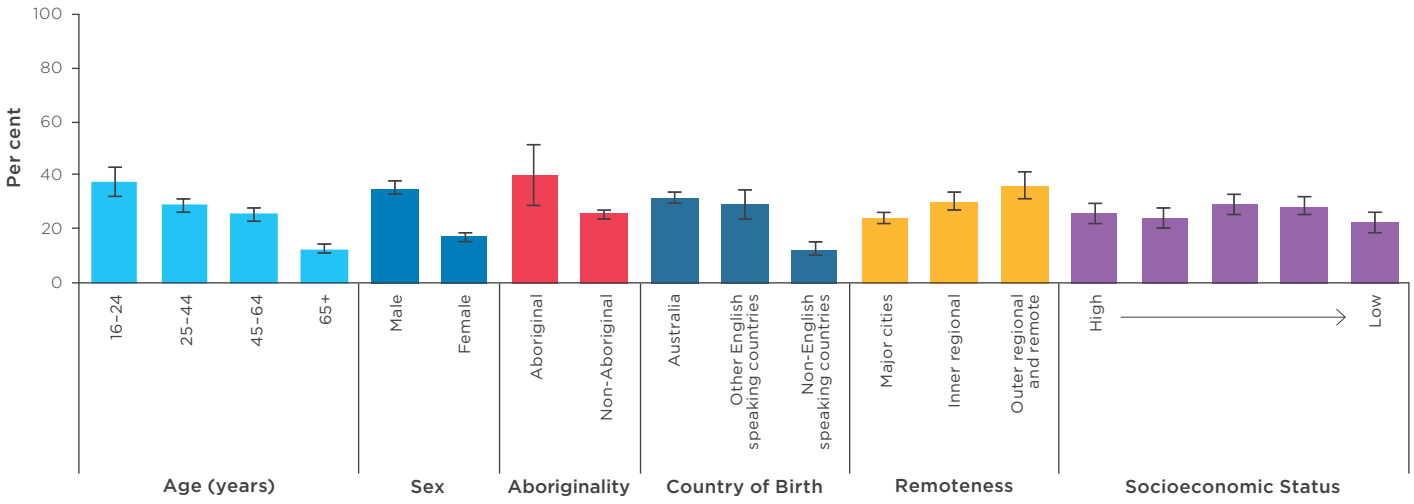
Source: NSW Population Health Survey
Note: Relates to more than 2 standard drinks on a usual day when alcohol is drunk.

Long-term risk of harm

Long-term risk of alcohol-related harm (also referred to as lifetime risk) refers to the harm from drinking arising from a chronic disease or accident or injury. The National Health and Medical Research Council guidelines state that drinking no more than 2 standard drinks on any day reduces the long risk of harm from alcohol-related disease or injury.[3] Every drink above this level continues to increase the long-term risk of both disease and injury. The guidelines for alcohol-related harm are the same for healthy men and women.

The NSW Population Health Survey is used to estimate the long-term risk of alcohol-related harm. In the survey, the definition of long-term risk is "more than 2 standard drinks on a day that you usually drink". Survey tools differ in the specific questions they ask about alcohol consumption and therefore have varying definitions of long-term risk.

Adults drinking at levels that increase long-term risk of alcohol-related harm, 16 years and over, NSW 2015



Source: NSW Population Health Survey
Note: Relates to more than 2 standard drinks on a usual day when alcohol is drunk.

The latest National Drug Strategy Household Survey in 2013 found that, of NSW drinkers who drank alcohol at levels that put them at long-term risk of harm, 52.9% had done something specific in the last 12 months to reduce their drinking.[19] These actions included reducing the number of times they drank, reducing the amount they drank when they did drink, and switching to lower alcohol drinks. More than half (58.0%) of all people trying to reduce their drinking were doing so for health reasons.

INFORMATION, EDUCATION, EARLY INTERVENTION, AND EDUCATION PROGRAMS

Get Healthy Service Alcohol Program

An alcohol enhancement for the Get Healthy Service has been developed for participants who nominate reduction of alcohol consumption as their primary health goal. The alcohol program features 10 coaching calls provided by trained health coaches utilising Motivational Interviewing and Cognitive Based Therapy approaches for sustainable behaviour change.

Phone: 1300 806 258 or
visit: www.gethealthynsw.com.au

Stay strong and healthy: it's worth it!

The Stay strong and healthy: it's worth it! project aims to raise awareness among Aboriginal women, their partners and young people, of the risks of alcohol consumption during pregnancy, including Fetal Alcohol Spectrum Disorders (FASD), and the availability of professional services to support them.

Your Room website

The Your Room website is the primary drug and alcohol information and resource website for NSW Health. A suite of web-based and printed factsheets are available and provide information on the effects and harms associated with alcohol and other drug use and how to get help.

Visit: www.yourroom.com.au

Family Drug Support

Telephone support to families in crisis is available 24 hours a day 7 days a week.

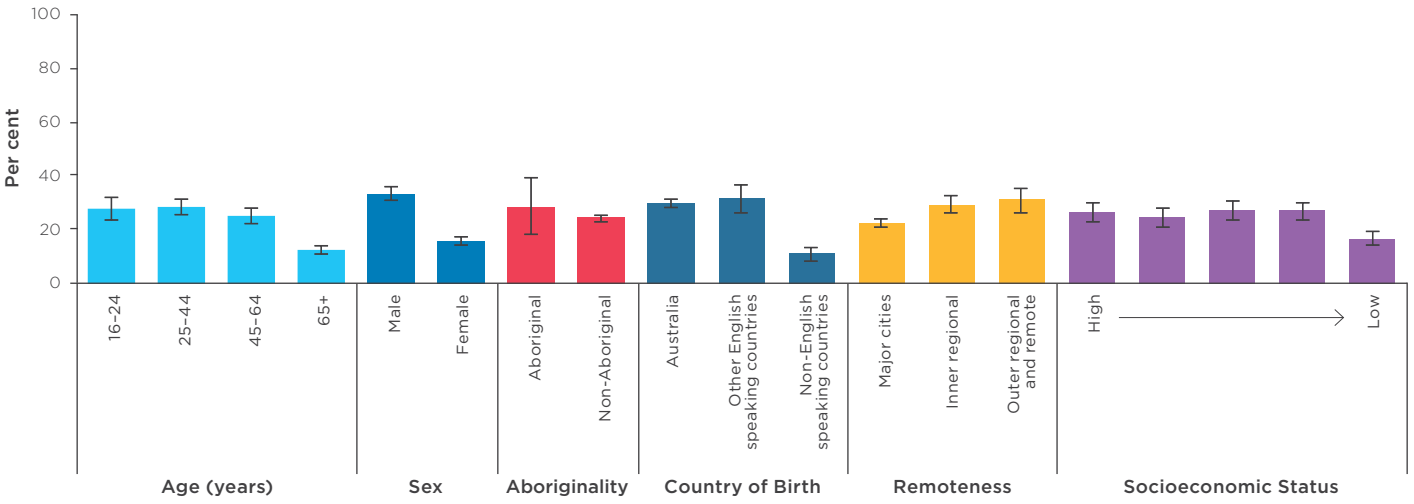
Call the Helpline on 1300 368 186 or
visit: www.fds.org.au

Alcohol and Drug Information Service (ADIS) NSW

A confidential 24 hours a day, 7 days a week telephone information, education, crisis counselling and referral service.

Telephone: (02) 9361 8000 (Sydney metro or 1800 422 599 (outside Sydney metro and interstate).

Drank more than 4 standard drinks on a single occasion in the last 4 weeks, 16 years and over, NSW 2015



Source: NSW Population Health Survey

IMMEDIATE RISK OF HARM

In 2015, about one quarter of all adults (24.3%) drank more than 4 standard drinks on a single occasion in the last 4 weeks, which put them at an increased risk of immediate harm.

Immediate risk of harm

The National Health and Medical Research Council guidelines recommend that consuming no more than 4 standard drinks on a single occasion reduces the risk of injury on that occasion.[3]

The guidelines note that drinking 4 standard drinks on a single occasion more than doubles the relative risk of an injury in the following 6 hours. This risk increases when more than 4 drinks are drunk on a single occasion.

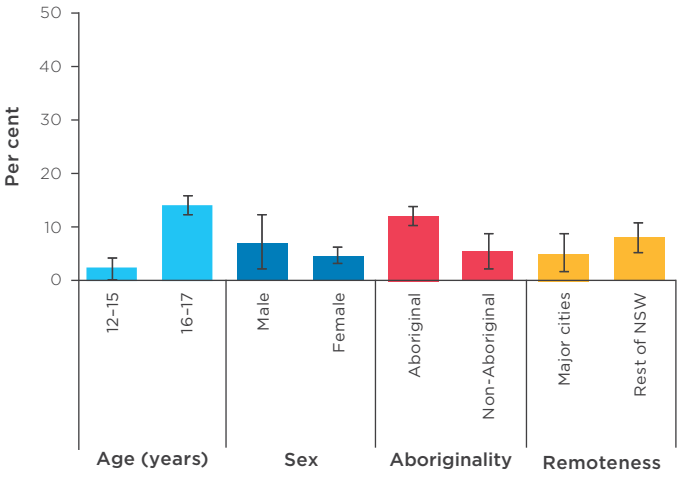
Those who were more likely to drink at levels that put them at immediate risk included:

- men
- people aged under 65 years
- those born in Australia or English speaking countries, and
- those living outside of major cities.

In 2014, just under half of students (43.7%) aged 12–17 years reported drinking alcohol in the last 12 months. Of these, about 1 in 20 (5.7%) reported drinking 4 or more drinks in a day in the last 7 days, compared with 1 in 10 (10.3%) in 2005.

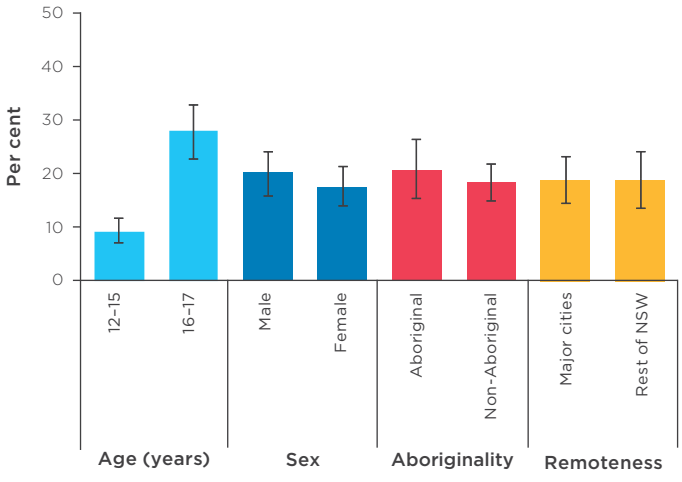
Almost 1 in 5 (19.1%) students aged 12–17 years, who reported drinking in the last 12 months, stated that they intended to get drunk most times or every time they drank alcohol. This is similar to 2011 (22.4%). For students aged 12–17 years, who drank in the last 12 months, there was no variation across socioeconomic groups in the intent to get drunk most or every time.

Drank 4 or more drinks on any of the last 7 days, students aged 12–17 years, NSW 2014



Source: NSW School Students Health Behaviours Survey

Intention to get drunk most or every time, students aged 12–17 years who drank in the last 12 months, NSW 2014



Source: NSW School Students Health Behaviours Survey

NON-DRINKERS

About one third of adults do not drink alcohol

People born in non-English speaking countries are twice as likely to be non-drinkers than those born in Australia or other English speaking countries

46.8%

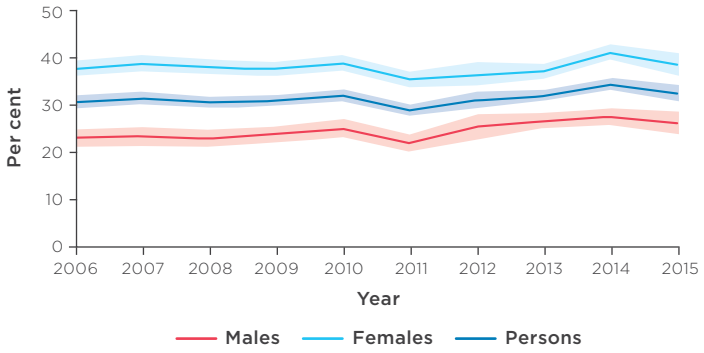
Almost half of all adults (46.8%) in the most disadvantaged socioeconomic group do not drink alcohol

Twice as many high school students had never had an alcoholic drink in 2014 compared with 2005

About 1 in 3 adults (32.6%) are non-drinkers, with about 1 in 4 men (26.3%) and fewer than 2 in 5 women (38.7%) not drinking alcohol. This has remained stable over the last decade.

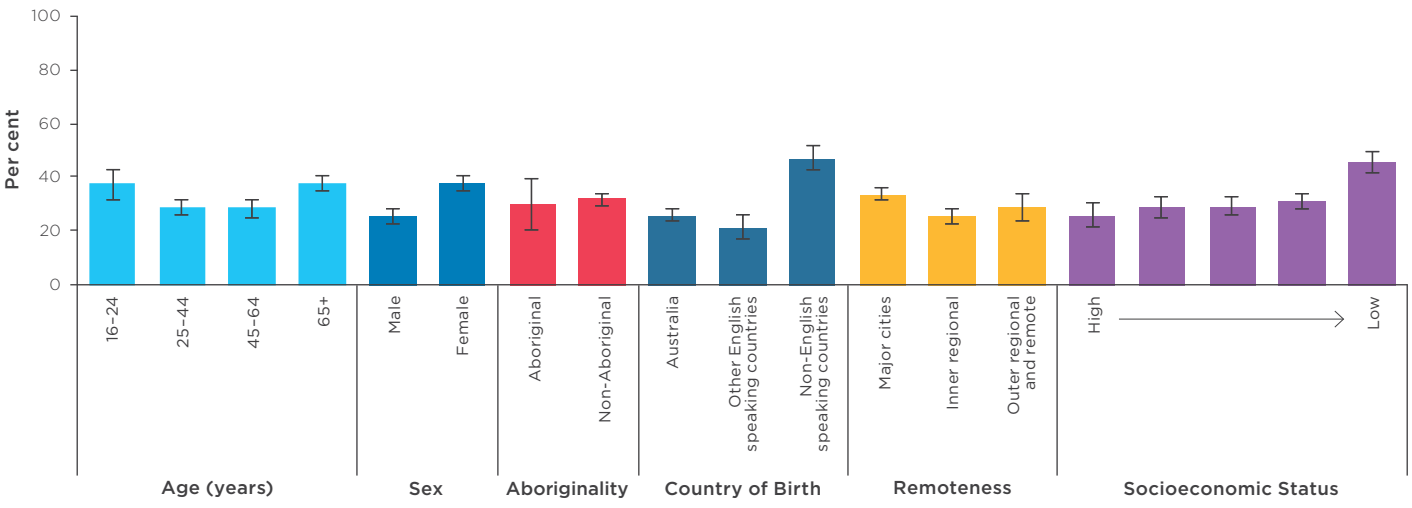
In 2015, almost half of all adults (48.0%) born in non-English speaking countries did not drink alcohol. This is substantially higher than those born in Australia or other English speaking countries. Similarly, about half (46.8%) of those in the most disadvantaged socioeconomic group were non-drinkers. Aboriginal people were equally as likely to be non-drinkers as non-Aboriginal people.

Non-drinkers, 16 years and over, NSW 2006–2015



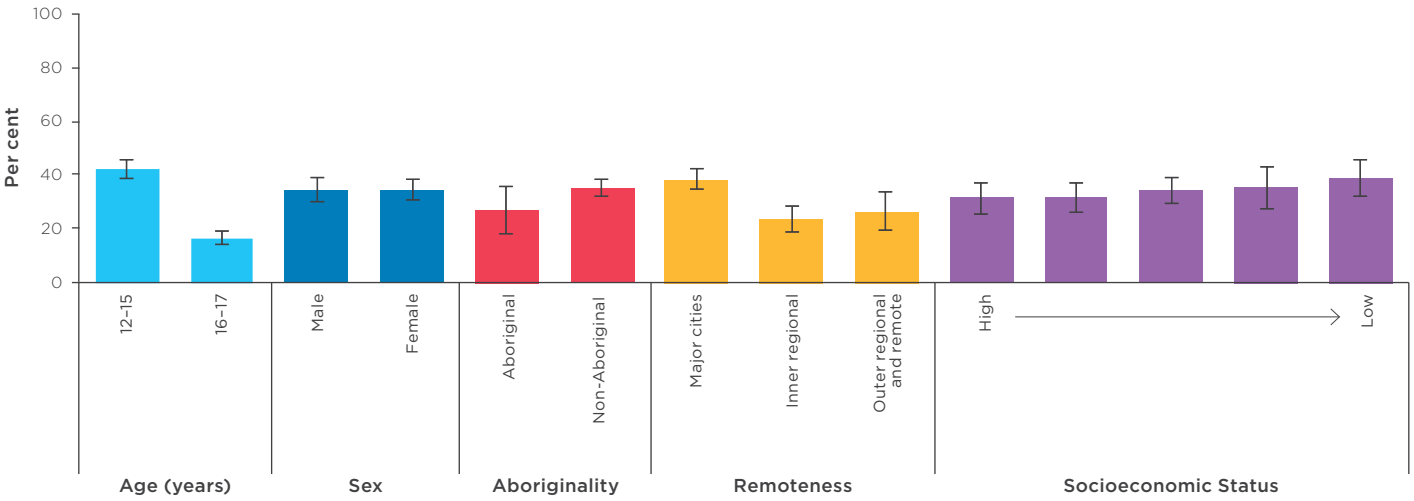
Source: NSW Population Health Survey

Non-drinkers, 16 years and over, NSW 2015



Source: NSW Population Health Survey

Never had an alcoholic drink, students aged 12–17 years, NSW 2014

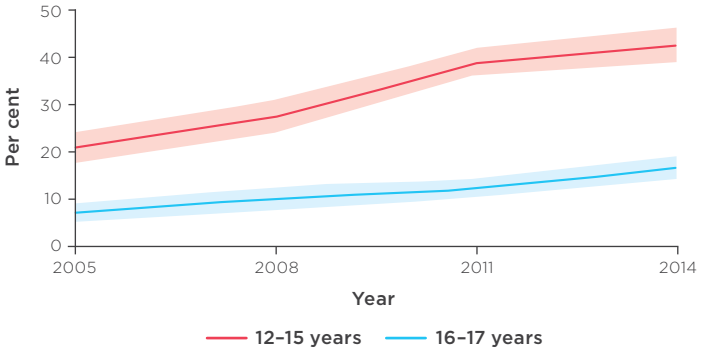


Source: NSW School Students Health Behaviours Survey

Over 1 in 3 (34.9%) students aged 12 to 17 years in 2014 had never had an alcoholic drink. This is double the proportion in 2005 (17.3%). Students from major cities were more likely to have never had a drink than those from regional or remote areas.

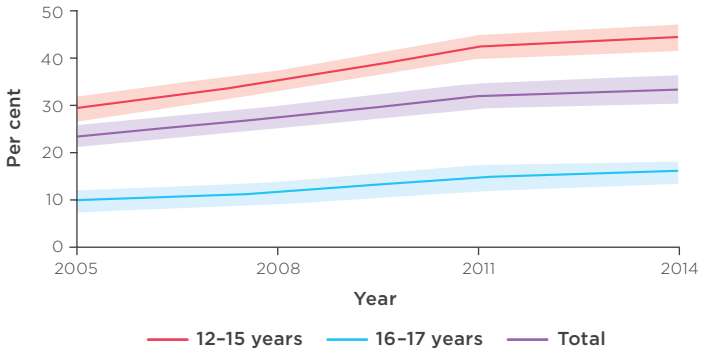
Of those students who had ever had an alcoholic drink, about 1 in 3 (33.3%) had not had 1 in the last 12 months. This is a substantial increase from 2005 when the figure was about 1 in 4 (23.4%).

Never had an alcoholic drink, students aged 12–17 years, NSW 2005 to 2014



Source: NSW School Students Health Behaviours Survey

Had an alcoholic drink, but not in the last 12 months, students aged 12–17 years, NSW 2005–2014



Source: NSW School Students Health Behaviours Survey

HEALTH IMPACTS

Alcohol-attributable hospitalisation rates have remained stable over the last 9 years

Alcohol-related emergency department attendances for 15–24 year olds have declined since 2007

15–24 years

Alcohol-attributable hospitalisations for 15–24 year olds have decreased over the last 9 years

Around 2 in 5 drug and alcohol treatment episodes in 2014–15 were related to alcohol use

EMERGENCY DEPARTMENT ATTENDANCES

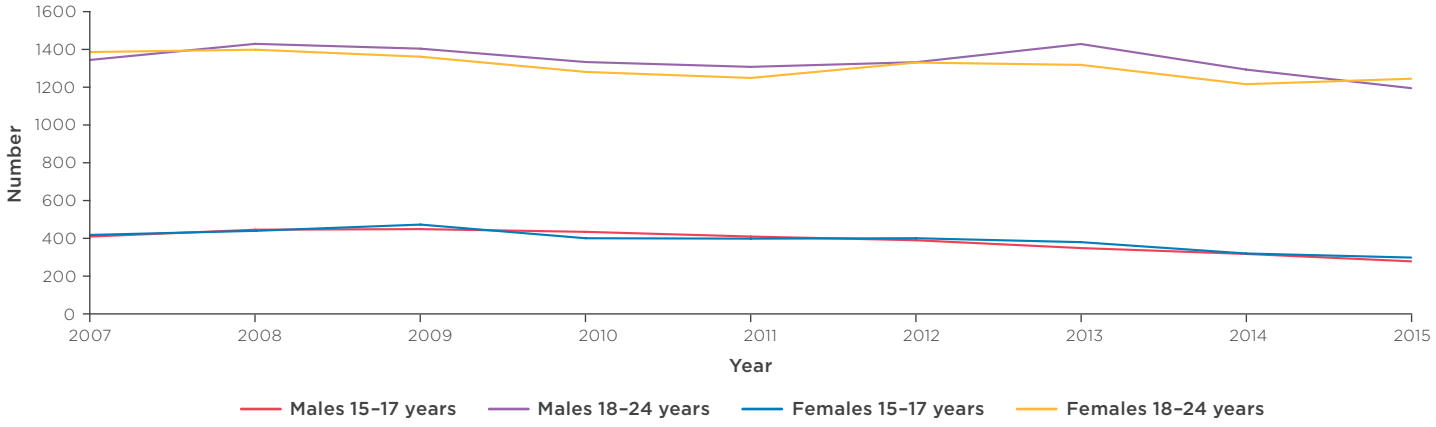
Alcohol-related emergency department (ED) attendances for young people are predominately due to acute alcohol issues, such as intoxication and injury.[20] ED attendances in young people aged 15–24 years for acute alcohol problems have declined from over 3,500 in 2007 to about 3,000 in 2015. The decline in ED attendances was broadly consistent for males and females and for the age groups 15–17 years and 18–24 years.

HOSPITALISATIONS

In 2014–15, approximately 1.9% of all hospitalisations for people aged 15 years and older (about 54,000) were attributed to alcohol. This corresponds to a rate of 841.0 hospitalisations per 100,000 people. People aged 15–24 years had a higher proportion of hospitalisations that were alcohol-attributable than older age groups. The proportion of alcohol-attributable hospitalisations has decreased in people aged 15–24 years, from 3.9% in 2006–07 to 2.9% in 2014–15. Alcohol-attributable hospitalisations, as a proportion of total hospitalisations, remained stable in the other age groups. Alcohol attributable hospitalisation rates increased with age, with rates for people aged 65 years and older more than 2 times higher than rates for people aged 15–24 years.

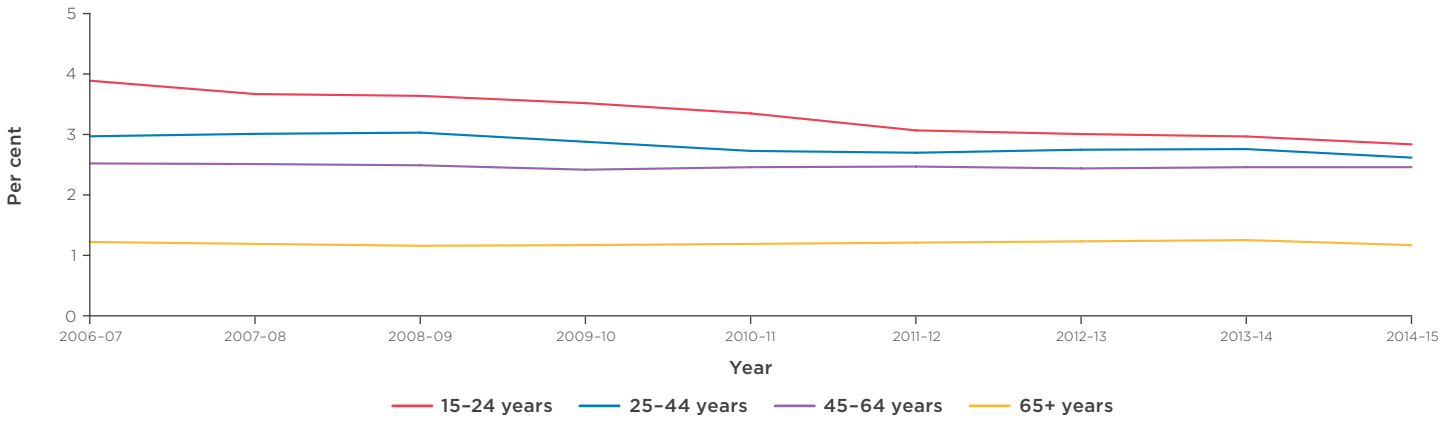
Alcohol-attributable hospitalisation rates per 100,000 population have remained relatively stable over the last 9 years. The rate of alcohol-attributable hospitalisations in the Aboriginal population is about 2 times higher than in the non-Aboriginal population.

Alcohol-related emergency department presentations, 15–24 years, NSW 2007–2015



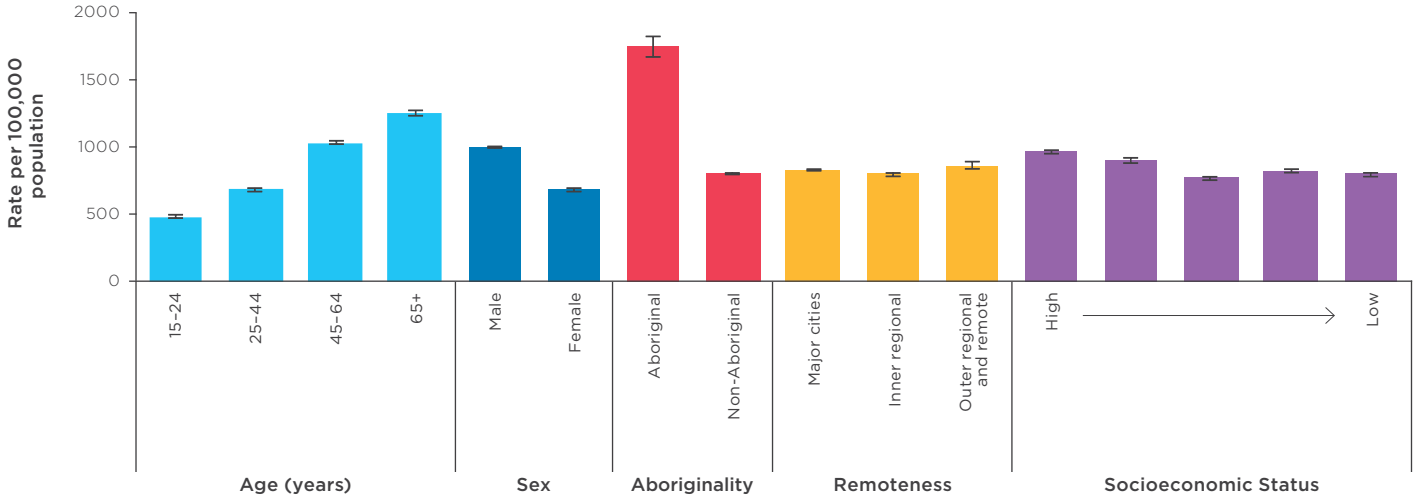
Source: NSW Emergency Department Records for Epidemiology

Alcohol-attributable hospitalisations as a proportion of total hospitalisations, 15 years and over, NSW 2006–07 to 2014–15



Source: NSW Combined Admitted Patient Epidemiology Data

Alcohol-attributable hospitalisations, 15 years and over, NSW 2014–15



Source: NSW Combined Admitted Patient Epidemiology Data

HEALTH SERVICES

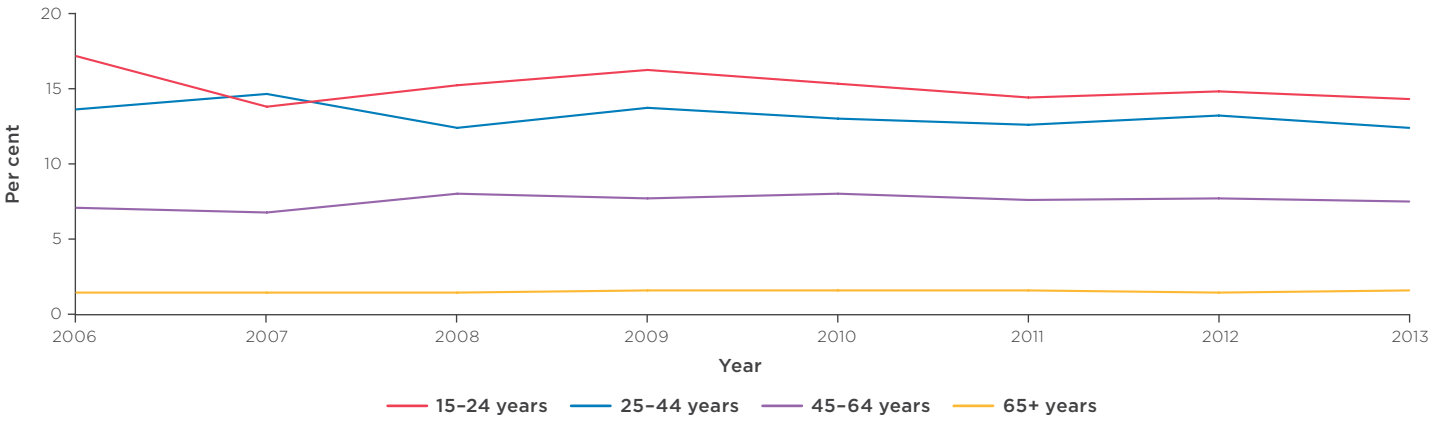
General practice plays an important role in identifying people drinking at potentially risky or high-risk levels. Brief interventions to reduce drinking in these patients, by providing advice on safe levels of alcohol consumption and the health consequences of risky drinking, plays an important part in reducing risky drinking.[21] Patients may also be referred to specialist treatment services if required.

NSW Health provides a comprehensive range of evidence based specialist drug and alcohol treatment services addressing both short and long term impacts arising from alcohol misuse. This includes withdrawal management, community based counselling and case management, the Involuntary Drug and Alcohol Treatment Program and hospital based consultation liaison services.

Non-Government Organisations (NGOs) are funded to provide support and other services for people with problems associated with alcohol misuse including residential rehabilitation, day programs, community information and education, building an Aboriginal workforce, and other locally based services to communities in NSW.

In 2014–15, there were 297 publicly funded treatment agencies for alcohol and other drugs in NSW. About 36,000 treatment episodes were completed in that year. Alcohol was the most common principal drug of concern, with more than 40% of episodes related to alcohol use. Counselling (43.6%) and withdrawal management (17.2%) were the most frequently used treatment methods for alcohol-related treatment episodes.[22]

Alcohol-attributable deaths as a proportion of total deaths, 15 years and over, NSW 2006–2013



Source: Australian Coordinating Registry Cause of Death Unit Record File

DEATHS

In 2013, about 2.6% of deaths (about 1,290) were attributed to alcohol in NSW, corresponding with a rate of 19.3 deaths per 100,000 population.

While the death rate attributable to alcohol was higher for older people than younger people, deaths among younger people were more likely to be related to an alcohol-attributable cause than deaths of older people. Men and those living outside a major city had higher alcohol-attributable death rates.

COMMUNITY EDUCATION AND PREVENTION

Community Drug Action Teams

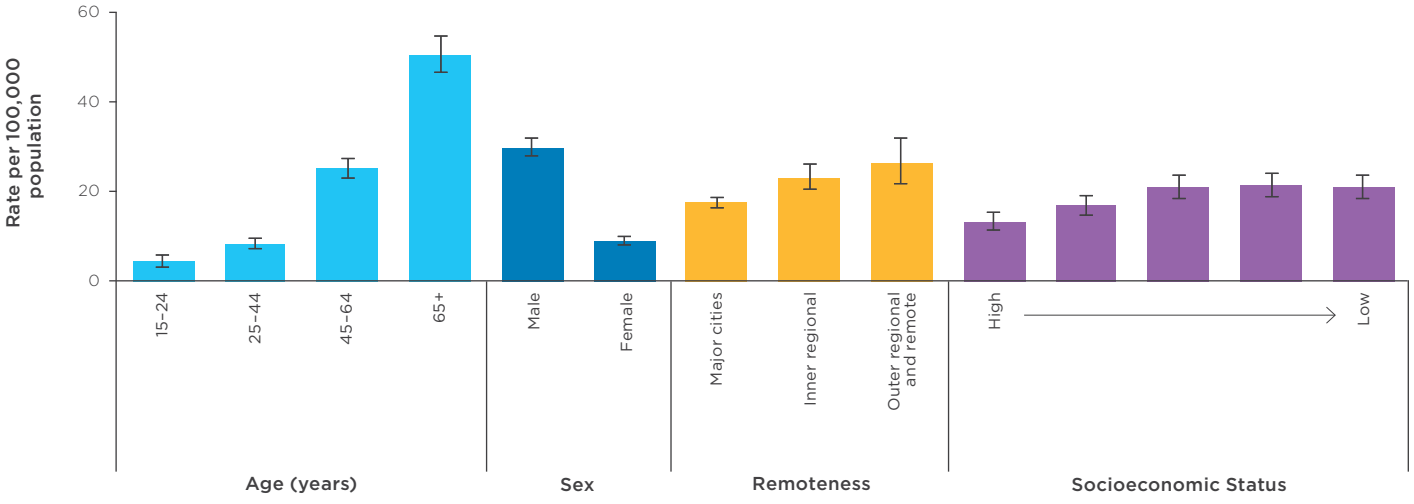
The NSW Ministry of Health supports Community Drug Action Teams (CDATs) across the state. CDATs are local groups of community members, volunteers, local businesses and welfare organisations, government and non-government agencies set up to prevent and reduce alcohol and other drug misuse in their communities.

Save-a-Mate

The Red Cross' Save-a-Mate (SAM) program provides training, education, first aid skills and health promotion initiatives on drug and alcohol issues that build the practical skills and knowledge of young people to look after themselves, respond in an emergency and provide support to their peers.

SAM delivers training to more than 3,700 young people each year.

Alcohol-attributable deaths, 15 years and over, NSW 2013



Source: Australian Coordinating Registry Cause of Death Unit Record File

HOW NSW COMPARES

NSW compares favourably with other states and territories

NSW
has the **greatest proportion** of **non-drinkers**

NSW
has the **second lowest proportion** of **long-term risky drinkers**

NSW
has the **lowest proportion of persons drinking at levels** that increase **immediate risk of harm**

NSW
ranks 4th for the proportion of **daily drinkers**

Source: National Drug Strategy Household Survey, 2013

GUIDELINES AND STANDARDS

National Health and Medical Research Council guidelines 2009

1. For healthy men and women, drinking no more than 2 standard drinks on any day reduces the lifetime risk of harm from alcohol-related disease or injury.
2. For healthy men and women, drinking no more than 4 standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion.
3. **a.** Parents and carers are advised that children under 15 years of age are at the greatest risk of harm from drinking and that for this age group, not drinking alcohol is especially important.
   b. For young people aged 15–17 years, the safest option is to delay the initiation of drinking for as long as possible.
4. **a.** For women who are pregnant or planning a pregnancy, not drinking is the safest option.
   b. For women who are breastfeeding, not drinking is the safest option.

What is a standard drink?

Beer			Wine		Spirits
Full strength	Mid-strength	Light	Red/White	Champagne	Shot
					
4.6% Alc/Vol	3.5% Alc/Vol	2.7% Alc/Vol	12.6% Alc/Vol	12.6% Alc/Vol	40% Alc/Vol
285ml	375ml	425ml	100ml	100ml	30ml
1.0	1.0	1.0	1.0	1.0	1.0

APPENDIX

DATA SOURCES

Secure Analytics for Population Health Research and Intelligence (SAPHaRI)

All NSW Health data sources have been accessed via Secure Analytics for Population Health Research and Intelligence (SAPHaRI). SAPHaRI is a data warehouse and an analysis tool based on SAS. It is managed by the Centre for Epidemiology and Evidence, NSW Ministry of Health, and employs sophisticated business intelligence technology to enable analysis of key health data sets.

NSW Population Health Survey

The NSW Ministry of Health has conducted the Population Health Survey continuously since 2002, using computer-assisted telephone interviewing (CATI) software. The questionnaire is delivered in 6 languages: English, Arabic, Chinese, Greek, Italian and Vietnamese. The target population for the survey is all state residents living in private households; approximately 1,000 persons in each of the health administrative areas, with a total sample size of 8,000–16,000 depending on the number of administrative areas included. Since 2002, a random digit dialling landline sampling frame has been used to reach the target population. In 2012 an overlapping dual-frame design was introduced to capture both landline and mobile users. Due to this change, estimates from the 2012 and later years Surveys reflect both changes that have occurred in the population over time and changes due to the use of a better sampling frame. For more information, see *Population Health Surveys* www.health.nsw.gov.au/surveys/Pages/default.aspx

NSW School Students Health Behaviours (SSHB) Survey

The NSW Ministry of Health conducted the last triennial School Students Health Behaviours (SSHB) Survey in 2014. The target population was all students in Years 7–12 enrolled during the period July–Dec 2014. Schools with fewer than 100 students and Non-English Language Schools were not included. The survey used a 2-stage probability sampling procedure: schools were selected first; students within schools were selected second. Schools were stratified by the 3 sectors (Government, Catholic, and Independent) randomly selected within each sector. The sampling procedure ensured the distribution of schools among the 3 sectors was reflected in the sample. Two samples were drawn: junior high school (to Year 10); and senior high school (Years 11 and 12). The 2014 collection year had a school-level response rate of 26%, which was lower than previous years.

National Drug Strategy Household Survey (NDSHS)

The National Drug Strategy Household Survey (NDSHS) is a survey of licit and illicit drug use in Australia managed by the Australian Institute of Health and Welfare. The 2013 survey was the 11th conducted under the auspices of the NDS since 1985. In 2013, 23,855 people across Australia 12 years or older provided information on their drug use patterns, attitudes and behaviours. The sample was based on households, so homeless and institutionalised people were not included in the survey (consistent with the approach in previous years).

NSW Combined Admitted Patient Epidemiology Data (CAPED)

The NSW CAPED is a census of all services for admitted patients provided by public hospitals, public psychiatric hospitals, public multi-purpose services, private hospitals and private day procedure centres. Data from institutions for people with a developmental disability and private nursing homes are not included. It is a financial year collection from 1 July through to 30 June of the following year. Information in this data set is provided by patients, health service providers and the hospital's administration. The number or rate of hospitalisations reflects a count of hospital separations (that is, discharge, death or transfer). Multiple hospitalisations may, therefore, be counted for a single individual, and may overestimate the true burden of a health problem in the community. For this report, figures for hospitalisations up to 2014–15 include an estimate of the small number of interstate hospitalisations in public hospitals of NSW residents.

NSW Emergency Department Records for Epidemiology (EDRE)

The NSW EDRE provides information about patient presentations to emergency departments (EDs) of public hospitals in NSW. It is derived from ED patient management systems. Data are from 66 NSW EDs that have reported continuously since 2007 and have reasonably complete diagnosis information for this time period. These EDs accounted for around 75% of all NSW ED activity in 2015. ED diagnoses are assigned by the treating clinician, rather than clinical coders.

It is difficult to identify the number of alcohol-related injury attendances to EDs from administrative data, as these presentations are more likely to be coded as an injury rather than an alcohol problem. ED presentations for older age groups are not presented as they are more difficult to interpret. This is due to a greater number of ED attendances for chronic conditions rather than acute alcohol issues in these age groups.

Australian Coordinating Registry Cause of Death Unit Record File (COD URF)

The Cause of Death Unit Record File (COD URF) contains all deaths registered in Australia, a subset was used to identify NSW residents whose death was registered in any state or territory of Australia. These data were provided by the Australian Coordinating Registry based at the Queensland Government Department of Justice and Attorney-General to the Centre for Epidemiology and Evidence, NSW Ministry of Health and were originally collated by the NSW Registry of Births, Deaths and Marriages, the National Coronial Information System (for coroner-reported deaths) and the Australian Bureau of Statistics. Counts of deaths for the latest years of data include an estimate of the number of deaths occurring in that year but registered in the next year. Data on late registrations were unavailable at the time of production.

Attributable fractions

Alcohol-attributable fractions measure the burden of disease associated with alcohol consumption within a specified population. Estimates of the numbers and rates of deaths and hospitalisations attributable to alcohol used age- and sex-specific attributable fractions developed by the School of Population Health, University of Queensland and the Australian Institute of Health and Welfare.[23] Conditions where low to moderate alcohol consumption have an apparent overall protective effect were excluded.

The results presented in this report are a combination of the wholly and partially alcohol-attributable conditions. Wholly attributable conditions are those that are only caused by alcohol use; for example, hospitalisations for "Alcohol dependence and harmful use" were all counted as alcohol-attributable. Partially attributable conditions are those that could have more than 1 cause, they include conditions such as pancreatitis, which is estimated to be due to alcohol use in about 1 in 4 cases. In the case of pancreatitis, approximately 1 in 4 hospitalisations were considered alcohol-attributable and included in the total alcohol-attributable hospitalisation figures.

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